1982 Datsun/Nissan 4 Tune-Up

TUNE-UP

Pickup, Sentra, Stanza, 200SX, 210, 310

ENGINE IDENTIFICATION

Engine code number followed by engine serial number is stamped on left side of cylinder block for 200SX and Pickup models and on right side of cylinder block for all other models, just below cylinder head mating surface.

ENGINE CODE

Application	Code
Pickup	Z22
Sentra	E15
Stanza	CA20
200SX	Z22E
210	
1200 cc	A12A
1400 cc	A14
1500 cc	A15
310	E15

COMPRESSION PRESSURE

Check compression pressure with engine at normal operating temperature, all spark plugs removed, electrical lead to anti-dieseling solenoid disconnected, choke and throttle valves wide open and engine at cranking speed. Crank engine at least 6 "puffs" per cylinder to determine engine compression. Lowest cylinder pressure should be at least 80% that of the highest cylinder pressure.

COMPRESSION SPECIFICATIONS

Compression Pressure	
Pickup, Stanza & 200SX	128-171 psi (9.0-12.0 kg/cm²)
Sentra & 310	142-181 psi (10.0-12.7 kg/cm²)
210	178-192 psi (12.5-13.5 kg/cm²)

VALVE CLEARANCE

NOTE: On all models, start and run engine to normal operating temperature. Turn engine off, remove valve cover and adjust clearances immediately. Do not allow engine to cool before or during adjustment, or incorrect valve clearances may be obtained.

PICKUP, STANZA & 200SX

1) Rotate crankshaft to bring the first cam lobe to a straight down position. Adjust intake valves on cylinders No. 1 and No. 2, and exhaust valves on cylinders No. 3 and No. 4.

2) Rotate crankshaft 360° to bring the first cam lobe to a straight up position. Adjust intake valves on cylinders No. 3 and No. 4, and exhaust valves on cylinders No. 1 and No. 2.

SENTRA, 210 & 310

1) Rotate crankshaft to bring No. 1 piston to TDC on compression stroke. Adjust intake valves on cylinders No. 1 and No. 2, and adjust exhaust valves on cylinders No. 1 and No. 3.

2) Rotate crankshaft 360° to bring No. 4 piston to TDC on compression stroke. Adjust intake valves on cylinders No. 3 and No. 4, and adjust exhaust valves on cylinders No. 2 and No. 4.

VALVE CLEARANCE SPECIFICATIONS

Application	[1] Clearance In. (mm)
Pickup, Stanza & 200SX	.012 (.30)
Sentra & 310	.011 (.28)
210	.014 (.35)

[1] — Adjust valves with engine hot.

VALVE ARRANGEMENT

Pickup, Sentra, Stanza, 200SX & 310
Right Side — All Intake
Left Side — All Exhaust
210
E-I-I-E-E-I-I-E (Front to rear)

SPARK PLUGS

SPARK PLUG TYPE

Application	NGK No.
Pickup & 200SX	
Intake Side	BPR6ES
Exhaust Side	BPR5ES
Sentra, 210 & 310	BPR5ES-11
Stanza	
Intake Side	BPR6ES-11
Exhaust Side	BPR5ES-11

SPARK PLUG SPECIFICATIONS

Application	Gap In. (mm)	Torque Ft. Lbs. (N.m)
Pickup & 200SX	.033 (.85)	11-14 (15-20)
Stanza, Sentra, 210 & 310	.041 (1.05)	11-14 (15-20)

HIGH TENSION WIRE RESISTANCE

Remove distributor cap from distributor but do not disconnect high tension wires from cap. Disconnect high tension wires from spark plugs. Using an ohmmeter, check resistance from contact at spark plug end of wires to contact inside of distributor cap. Resistance should be as specified. If resistance is higher, disconnect wire from cap and recheck resistance. Replace wire if resistance still exceeds specification.

WIRE RESISTANCE

Application	Ohms
All Models	30,000 Max.

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TUNE-UP (Cont.)

DISTRIBUTOR

All models are equipped with breakerless, transistorized ignition systems. Pickup, Stanza and 200 SX models have 2 spark plugs per cylinder and the distributor is equipped with 8 secondary wires and a dual level rotor which fires both spark plugs at the same time.

Fig. 1: Firing Order and Distributor Rotation (Pickup, Stanza and 200SX Models)

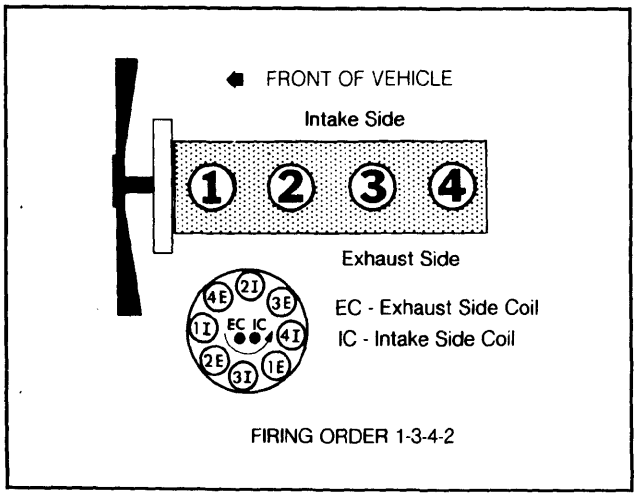


Fig. 2: Firing Order and Distributor Rotation (210 Models)

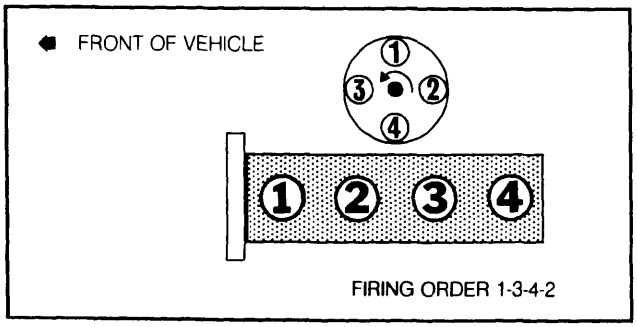
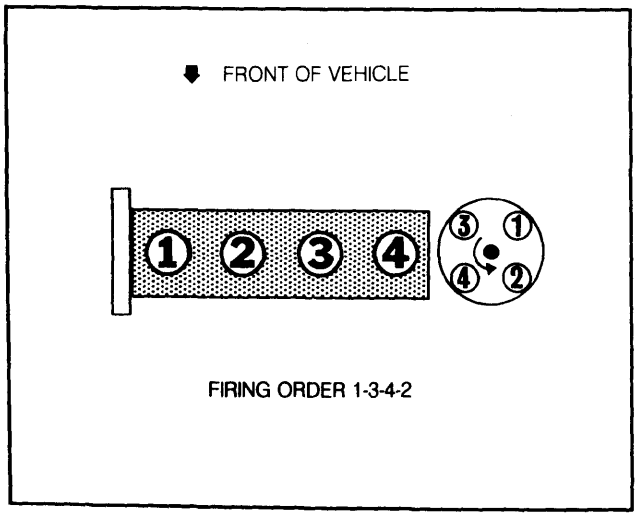


Fig. 3: Firing Order and Distributor Rotation (Sentra & 310 Models)



IGNITION TIMING

Check and adjust ignition timing with engine at normal operating temperature, air gap set within specifications and engine idle speed correct. Disconnect and plug distributor vacuum hose. To adjust, loosen distributor set screw and rotate distributor until correct timing is achieved. Tighten set screw, recheck timing and reconnect distributor vacuum hose.

IGNITION TIMING (Degrees BTDC@RPM)

Application	Man. Trans	Auto. Trans.
Sentra	2@750	6@650
Stanza	TDC@650	.....
200 SX	8@750	8@700
210		
1200cc Eng.	7@700	.....
1400cc Eng.	5@650	.....
1500cc Eng.	5@700	5@650
310	2@750	.....
Pickup	[1] 3@650	3@650

[1] — 4-WD is 3@700-900.

Fig. 4: Ignition Timing Mark Location (Pickup, Stanza and 200SX Models)

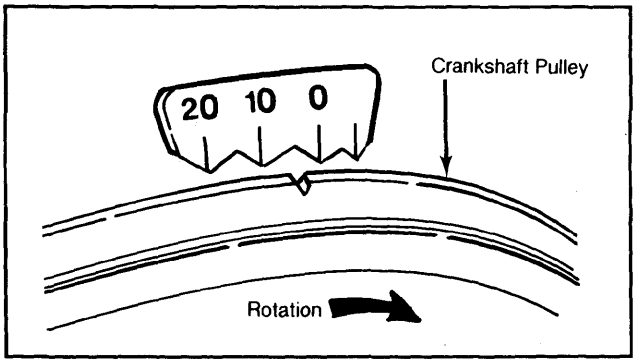
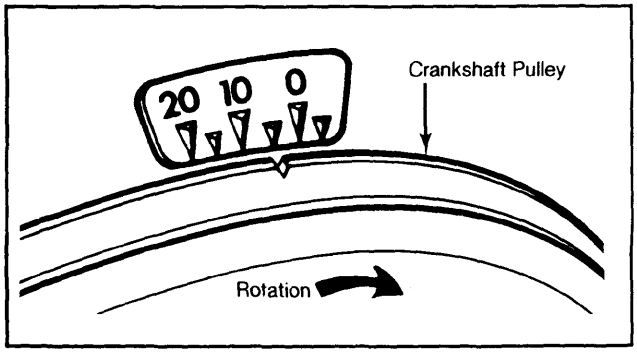


Fig. 5: Ignition Timing Mark Location (Sentra, 210 and 310 Models)



IDLE SPEED & MIXTURE

NOTE: Mixture adjustment is NOT a part of normal tune-up procedure and should not be performed unless mixture control unit is replaced, carburetor overhauled or vehicle fails emissions testing.

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TUNE-UP (Cont.)

NOTE: The following adjustment procedures should be performed with engine at normal operating temperature, air conditioning "OFF" (if equipped), ignition timing set to specifications and air cleaner installed. Set parking brake, block drive wheels and on models with automatic transmission, place gear selector in "D" position.

200SX

1) Connect a tachometer to engine and run at 2000 RPM for 5 minutes to stabilize operating condition. Accelerate engine 2-3 times and return to idle. Turn idle speed adjusting screw to obtain specified idle RPM.

2) Turn ignition switch off and disconnect throttle valve switch harness connector. Position harness connector at least 4" away from any secondary ignition wires. Disconnect and plug distributor vacuum hose.

3) Check, and if necessary, adjust ignition timing. Connect a jumper wire between throttle valve switch harness connector terminals No. 24 and 30. Disconnect oxygen sensor. Insert CO meter probe into tail pipe at least 16".

NOTE: Connecting jumper wire between connector terminals signals the control unit of a full throttle condition which allows the idle mixture to run at full load enrichment. This step is necessary to enrichen the CO% level at idle enough to be read by the CO meter.

4) With engine idling, check CO level. If necessary to adjust CO, remove air flow meter and drill a small hole in plug covering air by-pass screw. DO NOT allow drill to contact screw. Clean up metal shavings. Install self-tapping screw into hole and pull plug from bore. Install air flow meter.

5) Adjust CO level by turning air by-pass screw clockwise to richen mixture and counterclockwise to lean mixture. Remove air flow meter. Tap new seal plug, with convex side up, into air by-pass screw bore. Install air flow meter.

6) Stop engine and remove jumper wire from throttle valve switch harness connector. Reconnect harness and all hoses. Reset idle speed to specified RPM.

PICKUP, SENTRA, STANZA, 210 & 310

1) Connect a tachometer to engine. Run engine at idle speed on Sentra, 210 and 310 models or at 2000 RPM on Pickup and Stanza models for 12 minutes. Disconnect and plug distributor vacuum and air induction hoses.

2) Accelerate engine to 2000-3000 RPM several times. Return engine to idle speed for 1 minute. Check and adjust ignition timing. Insert CO meter probe 16" or more into tail pipe.

3) On Sentra, Stanza, 210 and 310 models, reconnect distributor vacuum hoses. Accelerate engine to 2000-3000 RPM several times and return to idle speed. On all models, check and adjust idle speed. Again accelerate engine several times and return to idle. Check CO level.

4) If necessary to adjust CO, remove carburetor and drill a small hole in plug covering mixture adjusting screw. DO NOT allow drill to contact screw or metal shavings to enter carburetor. Reinstall carburetor.

5) Adjust CO level by turning mixture adjusting screw clockwise to enrich mixture and counterclockwise to lean mixture. Reconnect all hoses and install new plug in mixture adjusting screw bore.

IDLE SPEED & CO LEVEL

Application	Idle RPM	Max. CO%
Pickup		
Man. Trans.		
2-WD	650	5.0
4-WD	800	5.0
Auto. Trans.	650	5.0
Sentra		
Man. Trans.	750	4.0
Auto. Trans.	650	4.0
Stanza	650	5.0
200SX		
Man.Trans	750	6.0
Auto. Trans.	700	6.0
210		
1200cc Eng.	700	4.0
1400cc Eng.	650	4.0
1500cc Eng.		
Man.Trans	700	4.0
Auto Trans.	650	4.0
310	750	4.0

COLD (FAST) IDLE RPM

SENTRA, 210 & 310

Adjust fast idle speed with engine at normal operating temperature, transmission in neutral and fast idle speed screw on 2nd highest step of fast idle cam.

FAST IDLE RPM

Application	Man.Trans.	Auto. Trans.
Sentra		
Federal	2400-3200	2400-3200
California	2300-3100	2300-3100
210		
Federal	2400-3200	2700-3500
California	2300-3100	2600-3400
310		
Federal	2400-3200	.....
California	2300-3100	.....

PICKUP & STANZA

1) Carburetor must be removed from vehicle to set fast idle. Place upper side of fast idle screw on 2nd step of fast idle cam. Measure throttle valve clearance between throttle plate and throttle bore.

2) Clearance should be .032-.038" (.81-.95 mm) on Pickup Man. Trans. models and .039-.044" (.98-1.12 mm) on Pickup Auto. Trans. models. Clearance should be .026-.032" (.66-.80 mm) on Stanza models. If not, adjust clearance by turning fast idle screw.

DASHPOT ADJUSTMENT

With engine at normal operating temperature and idle speed and mixture correctly set, turn throttle

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TUNE-UP (Cont.)

valve by hand and read engine speed when dashpot just contacts adjusting screw on stop lever. Turn adjusting screw on stop lever to obtain specified engine speed. Accelerate engine and release. When dashpot plunger contacts stop lever, engine should decelerate smoothly from 2000 RPM to 1000 RPM in about 3 seconds.

DASHPOT ADJUSTING SPECIFICATIONS

Application [1]	RPM
210	1900-2100
Pickup	1400-1600

[1] — Auto. Trans. models only.

FUEL PUMP

FUEL PUMP PERFORMANCE

Application	Pressure psi (kg/cm²)	Volume in 30 Sec. Pints (Liters)
Pickup & Stanza	3.4 (.24)	.8 (.75)
Sentra, 210 & 310	3.4 (.24)	.7 (.65)
200SX	30 (2.1)	.....

EXHAUST EMISSION SYSTEMS

See EXHAUST EMISSION SYSTEMS section.

GENERAL SERVICING

IGNITION

DISTRIBUTOR

All models are equipped with Hitachi breakerless, transistorized ignition systems.

DISTRIBUTOR PICK-UP COIL AIR GAP

Application	In. (mm)
All Models	.012-.020 (.3-.5)

IGNITION COIL

RESISTANCE Ohms@68°F (20°C)

Application	Primary	Secondary
Pickup, Sentra, 200SX & 310	1.04-1.27	7300-11,000
Stanza & 210	.84-1.02	8200-12,400

FUEL SYSTEMS

CARBURETORS

All Sentra, 210 and 310 models use a Hitachi DCR 306 carburetor. All Stanza and Pickup models use a Hitachi DCR 342 carburetor.

FUEL INJECTION

All 200SX models are equipped with Bosch AFC electronic fuel injection.

ELECTRICAL

BATTERY

BATTERY SPECIFICATIONS

Application	Amp. Hr. Rating
All Models	60

STARTER

All models use a Hitachi solenoid actuated starter with an overrunning clutch.

STARTER SPECIFICATIONS

Application	Volts	Amps	Test RPM
All Models	11.5	60	6000-7000

ALTERNATOR

All models use Hitachi alternators.

ALTERNATOR SPECIFICATIONS

Application	Rated Amp. Output
Pickup	
Standard	50
Heavy Duty	60
Sentra, 210 & 310	50
Stanza & 200SX	60

ALTERNATOR REGULATOR

All Models use a Hitachi IC regulator, integral with alternator.

REGULATOR OPERATING VOLTAGE@68°F (20°C)

Application	Voltage
All Models	14.4-15.0

SERVICE SPECIFICATIONS

REPLACEMENT INTERVALS

Component	Miles
Oil Filter	7500
Air Filter	30,000
Fuel Filter	15,000
Spark Plugs	30,000

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GENERAL SERVICING (Cont.)

BELT ADJUSTMENT

Application	[1] Deflection In. (mm)
Alternator	
Sentra & 310	.5 (13)
All Others	.4 (10)
A/C Compressor	
Pickup	.3 (8)
Stanza	.2 (5)
All Others	.3 (8)
Power Steering	
Pickup & 200SX	.5 (13)
All Others	.3 (8)
Idler Pulley	.3 (8)

[1] — Deflection is with 22 lbs. (10 kg) pressure applied midway on longest belt run.

FLUID CAPACITIES

Application	Quantity
Crankcase (Includes Filter)	
210	3.5 qts. (3.3L)
All Others	4.3 qts. (4.0L)
Cooling System (Includes Heater)	
Pickup & 200SX	10.5 qts. (9.9L)
Sentra	5.3 qts. (5.0L)
Stanza	7.8 qts. (7.3L)
210 & 310	6.3 qts. (5.9L)
Man. Transmission (SAE 80W-90/API GL-4)	
210	2.6 pts. (1.2L)
All Others	
4-Speed	3.6 pts. (1.7L)
5-Speed	4.3 pts. (2.0L)
Man. Transaxle (SAE 80W-90/API GL-4)	
4-Speed	4.9 pts. (2.3L)
5-Speed	5.8 pts. (2.7L)
Auto. Transmission (Dexron)	
All Models	5.9 qts. (5.6L)
Auto. Transaxle (Dexron)	
All Models	6.4 qts. (6.1L)
Front Axle (SAE 80W-90/API GL-5)	
All Models	1.0 qt. (.9L)
Transfer Case	1.5 qts. (1.4L)
Rear Axle (SAE 80W-90/API GL-5)	
All Models	1.0 qt. (.9L)
Fuel Tank	
Pickup	
Shortbed	
2-WD	13.3 gals. (50.0L)
4-WD	16.0 gals. (60.0L)
Longbed	
2-WD	17.0 gals. (64.0L)
4-WD	20.0 gals. (75.0L)
Sentra, 210 & 310	13.3 gals. (50.0L)
Stanza & 200SX	14.0 gals. (53.0L)